



**CONTRA COSTA
WATER DISTRICT**

1331 Concord Avenue
P.O. Box H2O
Concord, CA 94524
(510) 688-8000 FAX (510) 688-8122

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Directors

Joseph L. Campbell
President

James Pretti
Vice President

Elizabeth R. Anello
Bette Boatman
Noble O. Elcenko, D.C.

Walter J. Bishop
General Manager

May 13, 1997

Mr. Lester Snow
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Subject: Impact Analysis of CALFED Alternatives

Dear Lester:

The Contra Costa Water District ("District") appreciates the opportunity to comment on the proposed approach to impact analysis presented in the April 29 CALFED Workshop ("Workshop") and the Information Packet. The District has been an active participant in the CALFED process since its beginning and intends to continue its active role.

A previous California Urban Water Agencies ("CUWA") comment letter "Analytical Tools for CALFED Alternatives" (Byron Buck to Lester Snow, letter dated July 15, 1996) made a number of recommendations regarding the impact analysis of the CALFED alternatives. This letter elaborates further on a few of these issues.

1. Uncertainties in impact assessment and the linkage between assessment variables and CALFED Program objectives

The impacts of a number of components under study in the CALFED alternatives are uncertain *even in the qualitative sense*. More specifically, the effects of inundated Delta islands on the organic carbon loading to Delta channels and the changing tidal flow and flow split (due to modifications in the geometry of Delta channels) on fish migration are unlikely to be resolved within the time frame of the Programmatic EIR/EIS preparation. How these uncertainties regarding the potentially major impacts of the "Through-Delta" component or other in-Delta modifications might influence the selection of a preferred CALFED Alternative does not appear to have been addressed in the Workshop.

An adaptive management approach might not be applicable for implementing levee setbacks and inundating Delta islands. The high costs involved and the synergy of the set of modifications would make it difficult to design a gradual, "piece-by-piece" type implementation process. Owing to the complex hydraulics in the Delta channels, the impacts of inundating different islands and widening channels on flows, and water quality, are not additive. It would not be appropriate to extrapolate results during the interim of a "step-by-step" implementation process to the impacts of the complete set of modifications. The linkage between assessment variables and CALFED program goals and the decision process becomes the more critical. It is unclear at this point how CALFED plans to weigh the various assessment variables in evaluating its Alternatives, given the uncertainty on what the critical factors are.

Whereas a longer time frame to allow for the development of better scientific understanding might not be feasible, a comprehensive review of different views might be valuable to the CALFED process. An expert panel might be convened to make a synoptic assessment of the fishery impacts of the Through-Delta, followed by public forums. This might offer a more efficient process to resolve the differences than if they are to be deferred to the public comment process to the Programmatic EIR/EIS. Alternatively, the Bay-Delta Modeling Forum could, in collaboration with CALFED, address the questions through its workshops.

2. Interdependence between water supply modeling and water quality modeling

The District is concerned that CALFED plans to defer the study of the effects of different inflows and exports simulated by DWRSIM on the salinity distribution in the Delta. CALFED needs to check the water quality benefits and impacts of each storage and conveyance alternative using a salinity transport model. DWRSIM accounts for water quality standards only through net Delta outflow. Even though net Delta outflow gives good estimates of the salinity at downstream locations where salinity intrusion dominates, salinity in interior Delta (such as the District's Los Vaqueros intake) could also be affected by the export locations and agricultural drainage. For example, an isolated facility exporting at different capacities could lead to different salinity distributions in south Delta, and this difference is not accounted for in the current algorithm in DWRSIM. Furthermore, empirical relationships between Delta outflow and salinity at downstream locations that are calibrated using historical data may no longer be valid if the configuration of the Delta is significantly modified.

It is essential to verify that the outputs from DWRSIM do indeed meet the salinity objectives. Simulating the effects of various operation rules without verifying the salinity impacts could lead to errors in yield predictions if water quality objectives are not met. Verifications at an early stage could reduce the need to repeat DWRSIM simulations later on.

3. Reliability of model results

The performance of one-dimensional hydrodynamic and transport models in simulating structural changes in the Delta cannot be easily assessed. Comparison of results on similar scenarios from different models could provide more confidence and insights to the study.

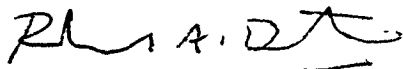
Besides the simulations using DWRSIM and DWRDSM1 now underway at DWR, there are ongoing efforts by the Ag/Urban Technical Teams to study various Alternative components using a

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slightly different version of DWRSIM and the Fischer Delta Model. CALFED should make use of these results to supplement DWR's efforts in the CALFED process.

The District would be happy to discuss these suggestions in more detail with you or your staff. If you have any questions, please contact me at (510) 688-8187.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. A. Denton', with a horizontal line underneath.

Richard Denton
Water Resources Manager

RAD/KTS

cc: Stein Buer, CALFED
Bellory Fong, CALFED
Rick Woodard, CALFED
Jay Lund, BDMF
Byron Buck, CUWA